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l4 and kit

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l4 and kit

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Search History**Today's Date: 8/8/2000**

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USPT	l4 and plasmon	0	<u>L6</u>
USPT	l4 and resonance	0	<u>L5</u>
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USPT	(5989843 or 5837822).pn.	2	<u>L1</u>

Plus Search

09259658_LIST

PLUS Search Results for S/N 09259658, Searched July 13, 2000

~~6001619~~ ~~5856132~~
~~5902615~~
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5811284
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09259658_CLS
Most Frequently Occurring Classifications of Patents Returned
From A Search of 09259658 on July 13, 2000

Original Classifications

6 435/6
4 435/69.1
4 530/350
2 435/193
2 435/320.1
2 435/7.2
2 530/387.3
2 536/23.5

Cross-Reference Classifications

19 435/320.1
15 435/252.3
10 435/325
10 536/23.5
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Combined Classifications

09259658_CLS

21 435/320.1
16 435/252.3
13 435/69.1
12 536/23.5
11 435/325
9 530/350
9 536/23.2
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Generate Collection

L9: Entry 9 of 47

File: USPT

Jul 27, 1999

US-PAT-NO: 5929227

DOCUMENT-IDENTIFIER: US 5929227 A

TITLE: Dimeric fluorescent energy transfer dyes comprising asymmetric cyanine azole-indolenine chromophores

DATE-ISSUED: July 27, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Glazer, Alexander N.	Orinda	CA	N/A	N/A
Benson, Scott C.	Oakland	CA	N/A	N/A

US-CL-CURRENT: 536/26.6; 536/22.1

CLAIMS:

What is claimed is:

1. A kit comprising a plurality of dyes, wherein at least one of said dyes is heterodimeric and a combination of donor and acceptor chromophores selected from the group consisting of indolenine-benzoheteroazole, quinolinium-benzoheteroazole and benzoheteroazole-benzoheteroazole, wherein said hetero is oxygen, nitrogen or sulfur and said chromophores are linked by an alkyleneaminoalkylene linking group, wherein the length of one of said alkylene groups is different from the other alkylene groups and results in enhancing at least one of percent quenching of the donor chromophore and dsDNA affinity in gel electrophoresis, wherein said dsDNA affinity as measured by t.sub.0.5 (min) in agarose gel electrophoresis is at least 150.
2. A kit according to claim 1, wherein said at least one of said dyes comprises an alkyleneaminoalkylene bridge having two amino groups and the alkylene bonded to one of said chromophores is of a different number of carbon atoms than the other alkylene groups.
3. A kit according to claim 1, wherein said heterodimeric dyes have the same donor chromophore.
4. A kit according to claim 3, wherein said donor chromophore is a benzothiazole-quinolinium dye.
5. A kit according to claim 4, wherein said benzothiazole-quinolinium dye is thiazole orange.
6. dsDNA to which is bound a heterodimeric dye selected from the group consisting of TOTIN-butyl having the structure of 17b of FIG. 12, TOTAB-butyl having the structure of 18b of FIG. 12 and TOTAB-pentyl having the structure of 18c of FIG. 12.
7. TOTIN-butyl having the structure of 17 b of FIG. 12.
8. TOTAB-butyl having the structure of 18b of FIG. 12.
9. TOTAB-pentyl having the structure of the 18c of FIG. 12.
10. In a method for separating components of a mixture using a plurality of dyes having different fluorescent emission wavelengths, the improvement which comprises:
using as one of said dyes, a dye selected from the group consisting of TOTIN-butyl having the structure of 17b of FIG. 12, TOTAB-butyl having the structure of the 18b of FIG. 12, and TOTAB-pentyl having the structure of 18c of FIG. 12.

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